Data dictionary for DFU data

**Explanation of columns and data for Excel spreadsheet “DFU sample form Data 6.2.22”**

|  |  |  |
| --- | --- | --- |
| **Column** | **Column title** | **Explanation** |
| A | OBJECTID | ID for each DFU data form entry |
| B | DFU Deployment ID | Indicates if sample was a blank or the DFU identifier when deploying DFU |
| C | DFU collection ID | Indicates if sample was a blank or the DFU identifier when collecting DFU data |
| D | DFU deployment flow | Avg flow of 3 readings taken at deployment |
| E | DFU collection flow | Avg flow of 3 reading taken at collection |
| F | Overall average flow | Avg flow of collection and deployment flows |
| G | Air flow cubic meters per minute | Converts column F to cubic meters |
| H | Deployment date/time | When deployment flow readings taken |
| I | Collection date/time | When collection readings taken |
| J | Sample time | Total time in days when DFU was operated to take air sample |
| K | Sample volume | Total air volume sampled: Sample time X avg flow |
| L | Sample type | Either blank of field sample |
| M | comments | Notes such as weather or if generator inadvertently shut down, etc. |
| N | Global ID | Not used |
| O | Creation date | When data form created |
| P | Creator | Timothy Boe |
| Q | Edit date | Not used |
| R | Editor | Not used |
| S | Sample bag | ID of sample bag for DFU filters |
| T-Y | Flow measurements | Individual flow measurements for deployment and collection |
| Z | Collection method | DFU |
| AA | Combined ID | Combines Column A ID with “DFU” |
| AB | Start time/date | When air sampling started |
| AC | Cell ID | Not used |
| AD-AE | x and y | GPS coordinates |

“Deployment” refers to when new filter cassettes were placed into the DFUs and initial flow readings taken

“Collection” refers to when filters from DFUs were collected at end of sampling period

**Explanation of columns for Excel spreadsheet “Master DFU sample results”, Field Samples Tab**

|  |  |  |
| --- | --- | --- |
| **Column** | **Column title** | **Explanation** |
| A | LRN sample ID | Not used |
| B | Sample type | All are DFUs |
| C | EPA sample ID | This shows the sample ID for DFU filters (column S from “DFU sample form Data 6.2.22” spreadsheet) as well as the ID for the entry on the DFU sample form (column AA from “DFU sample form Data 6.2.22” spreadsheet) |
| D-F | Date recd processed, plated | Date biolab recd, processed, plated sample |
| G | Total sample volume | Volume of PBST liquid used to extract spores from filters. For DFUs, it was always 20 mL. |
| H-S | CFU per 100 µL spread plate | CFU results for triplicate plates at 10-1 to 10-4 dilution |
| T-V | CFU per 1 mL filter plate | CFU results for triplicate filter plates, zero dilution |
| W | CFU per 5 mL filter plate | CFU filter plate results if 5 mL used |
| X | CFU per 10 mL filter plates | CFU filter plate results if 10 mL used |
| Y | CFU filter plate using other volume | CFU filter plate results |
| Z | Total CFU | Sum of filter plate CFU results |
| AA | Total volume analyzed | Total volume filter plated |
| AB | CFU/mL | Total CFU /total volume filter plated |
| AC | CFU/sample | CFU/mL X volume of extraction liquid used (20 mL) |
| AD-AE | QC and data qualifier | Description of any issues such as CFU < LOQ or not detected |
| AF | Notes | Notes on filter plate volumes or background contamination, etc. |
| AG | Field sample, media blank | Type of sample |
| AH | Phase | Phase of DFU air sampling during field exercise |
| AI | From DFU air volume spreadsheet | DFU filters sample ID |
| AJ | Sample volume cubic meters | Air volume sampled; this comes from “DFU sample form data 6.2.22” spreadsheet |
| AK | CFU/m3 | Column AC/Column AJ |
| AL | DFU | Which DFU sample came from |
| AM | Date for sampling | Date of DFU sampling |

CFU=colony forming unit

For columns reporting CFU results (H-Z): none=no B. atrophaeus CFU detected; N/A=that dilution or plate volume not performed; TNTC=too numerous to count; ND=indeterminate number of target CFU due to non-target contamination. Refer to manuscript for how data treated in these scenarios.